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TO: Paul Deschaine, David Canada      DATE: February 7, 2011  
FROM: Rick Davee, Chris Berg      PROJECT NO.: 11607C  
SUBJECT: Water & Sewer Infrastructure Cost Analysis Assumptions

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The following assumptions were used in generating the projected cost analyses for the Commercial District Water and Sewer System.

- The project area to be included in this phase is from the Stratham/Exeter town line to Bunker Hill Avenue. The public water system and public sanitary sewer system would be built at the same time.
- The capital cost for the water and sewer systems is \$22,000,000.
- Water Treatment/Storage and Distribution Capital Costs are from Table 15 (phases 2-3A) Wright-Pierce report titled "Fire Suppression and Potable Water Supply Study" dated May 2010. This figure has been adjusted less \$1M to compensate for the expected saving by installing a ground level tank at 28 Bunker Hill Road instead of the elevated tank at the Town Hall site
- Sewer Project Costs are from Table 5-1 of the Wright-Pierce report titled "Wastewater Concept Management Plan - Draft" dated January 2011.
- Water expenses are from Appendix H Wright-Pierce report titled "Fire Suppression and Potable Water Supply Study" dated May 2010.
- Sewer expenses are from Table 5-2 of the Wright-Pierce report titled "Wastewater Concept Management Plan - Draft" dated January 2011.
- Project area property valuations are based on projected build out for 2031. The values are from the Wright-Pierce report titled ""Fire Suppression and Potable Water Supply Study" dated May 2010."
- Existing town wide property valuation information was obtained from Town of Stratham Tax Clerk, January 26, 2011.
- A mil rate of \$18.73 per \$1,000 of valuation was used to determine projected additional revenue from the increased property valuation in the project area.
- Projections between 2011 and 2031 represent straight line interpolation between 2011 baseline data and 2031 projections.

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- Water and sewer billing rates were chosen to be similar to Exeter, NH rates.
- Principal and Interest on water and sewer capital expenses assume a 20 year bond at 4.5% interest from the NH Municipal Bond Bank.
- Water and sewer customer and usage estimates are from Wright-Pierce report titled "Fire Suppression and Potable Water Supply Study" dated May 2010.
- Water expenses assume that water from the wells can be collected and treated at a central location.
- Inflation was not considered for the expenses or revenues over the 20-year period.

The two attached figures break down how the cost of the water and sewer systems could be paid for over the 20-year bond life. The stacked bars reference the left-hand y-axis and represent the funding sources for the water and sewer infrastructure: Municipal Contribution, Fire Precinct Revenue (Fire Precinct Tax, Hydrant Rental), and Water & Sewer Billing. As build-out grows with time, a greater portion of the water system cost is funded by additional Fire Precinct Revenue and Water & Sewer Billing, while the portion funded by the Town-wide tax decreases. Figure 1 assumes that complete build out of the project area occurs linearly over the 20 year period of bond repayment; Figure 2 represents a scenario where only half of the projected build out occurs linearly over the 20 year period of bond repayment. The red line is also referenced to the left-hand y-axis, and indicates projected operating expenses for the Water & Sewer infrastructure, including debt service. The blue line is referenced to the right-hand y-axis, and projects the additional tax revenue available to the Town as a result of constructing the water and sewer infrastructure.

The attached graphs show that the Town of Stratham will have increased income to finance a water and sewer district. In order to fund the initial capital investment the Town will need to support a portion of the infrastructure expenses up front until development increases and the number of users increases to a point where the water and sewer system is financially self-sufficient. The actual rate at which water and sewer billing, fire precinct revenue, and additional base tax revenue grow will depend on the rate at which build-out occurs; quicker build-out will result in a quicker increase of revenues, and vice-versa. The longer term view is very positive for the community with the increase in tax revenues being able to fund projects outside of the Gateway Commercial Business District.

cc: Lincoln Daley, John Boisvert